



## FACT SHEET

### Facts About the Laboratory Response Network

In 1999, the Centers for Disease Control and Prevention (CDC) established the Laboratory Response Network (LRN). The LRN's purpose is to run a network of labs that can respond to biological and chemical terrorism. The LRN has grown since it was set up. It now includes state and local public health, veterinary, military, and international labs. This fact sheet provides a brief description of the LRN, and how it works.

#### The LRN Mission

The LRN and its partners will maintain an integrated national and international network of laboratories that is fully equipped to respond quickly to acts of chemical or biological terrorism, emerging infectious diseases and public health threats and emergencies.

#### What is the LRN?

The LRN is a national network of about 120 labs. The network includes the following types of labs:

- **Federal** – These include labs at CDC, the US Department of Agriculture, the Food and Drug Administration (FDA), and other facilities run by federal agencies.
- **State and local public health** – These are labs run by state and local departments of health.
- **Military** – Labs operated by the Department of Defense, including the U.S. Army Medical Research Institute for Infectious Diseases (USAMRIID) at Ft. Detrick, Md.
- **Food testing** – The LRN includes FDA labs and others that are responsible for ensuring the safety of the food supply.
- **Environmental** – Includes labs that are capable of testing water and other environmental samples.
- **Veterinary** – Some LRN labs, such as those run by USDA, are responsible for animal testing. Some diseases can be shared by humans and animals, and animals often provide the first sign of disease outbreak.
- **International** – The LRN has labs located in Canada, the United Kingdom and Australia.

#### The LRN in Action

##### ***Anthrax attacks of 2001***

The LRN has been put to the test on several occasions. In 2001, a Florida LRN reference laboratory discovered the presence of *Bacillus anthracis* in a clinical specimen. *B. anthracis* causes anthrax. LRN labs tested 125,000 samples by the time the investigation was completed. This amounted to more than 1 million separate tests.

##### ***BioWatch***

BioWatch is a program using air samplers to test for threat agents. The samplers are located in undisclosed cities and monitor the air 24 hours a day, 7 days a week. LRN BioWatch labs test filters from these samplers. Tests include polymerase chain reaction (PCR). PCR can quickly detect the presence of an agent's unique DNA.

## The Laboratory Response Network

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### Severe Acute Respiratory Syndrome

CDC labs identified the unique DNA sequence of the virus that causes severe acute respiratory syndrome (SARS). The LRN developed tests and materials needed to support these tests. LRN gave member labs access to the tests and materials.

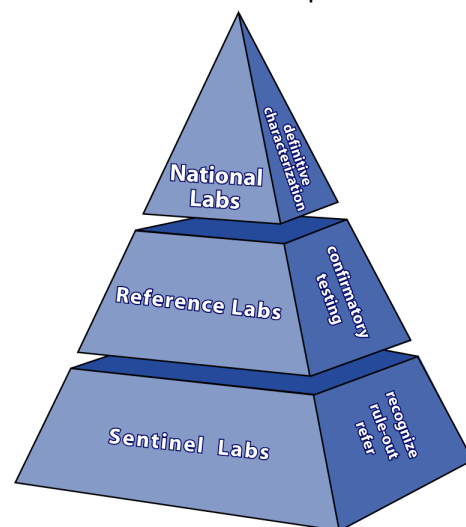
### The LRN Structure

LRN labs are designated as either national, reference, or sentinel. Designation depends on the types of tests a laboratory can perform and how it handles infectious agents to protect workers and the public.

**National labs** include the CDC and USAMRIID. They have unique resources to handle highly infectious agents and the ability to identify specific agent strains.

**Reference labs**, sometimes referred to as "confirmatory reference," can perform tests to detect and confirm the presence of a threat agent. These labs ensure a timely local response in the event of a terrorist incident. Rather than having to rely on confirmation from labs at CDC, reference labs are capable of producing conclusive results. This allows local authorities to respond quickly to emergencies.

**Sentinel labs** represent the thousands of hospital-based labs that are on the front lines. Sentinel labs have direct contact with patients. In an unannounced or covert terrorist attack, patients provide specimens during routine patient care. Sentinel labs could be the first facility to spot a suspicious specimen. A sentinel laboratory's responsibility is to refer a suspicious sample to the right reference lab.



### How Do Public Health Labs Become LRN Members

State lab directors determine whether public health labs in their states should be included in the network. Membership is not automatic. Prospective reference labs must have the equipment, trained personnel, properly designed facilities, and must demonstrate testing accuracy. State lab directors determine the criteria for inviting sentinel labs to join the LRN.

### Partnerships

The LRN is also a partnership between government and private organizations that have a stake in bioterrorism and chemical preparedness. CDC runs the program with direction and recommendations provided by the following agencies and organizations:

- The Association of Public Health Laboratories;
- The Federal Bureau of Investigation (Department of Justice);
- The American Association of Veterinary Laboratory Diagnosticians;
- The American Society for Microbiology;
- The Environmental Protection Agency;
- The US Department of Agriculture;
- The Department of Defense;
- The US Food and Drug Administration;
- The Department of Homeland Security.

For more information, visit [www.bt.cdc.gov](http://www.bt.cdc.gov), or call the CDC public response hotline at (888) 246-2675 (English), (888) 246-2857 (español), or (866) 874-2646 (TTY).

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